

APPENDIX

ABSTRACT OF THE DISCLOSURE

A nonvolatile semiconductor memory device [comprised of] having MONOS type memory cells of increased efficiency [of] by hot electron injection [in a write operation as well as] and improved scaling characteristics [is disclosed] includes [. The memory transistor comprises] a channel forming region in the vicinity of the surface of the substrate, a first and a second impurity regions, acting as a source and a drain in operation, formed in the vicinity of the surface of the substrate sandwiching the channel forming region [between them, acting as a source and a drain in operation, a gate insulating film stacked on the channel forming region and comprised of a plurality of films, a gate electrode provided on the gate insulating film,] and having a plurality of films, and a charge storing means [which] that is formed in the gate insulating film dispersed in the plane facing the channel forming region. [and in the direction of thickness and is injected with excited hot electrons in operation due to the electric fields applied. The] A bottom insulating film [constituting and at the bottom of the gate insulating film] includes a dielectric film that exhibits a FN type electroconductivity and makes the energy barrier between the bottom insulating film and the substrate lower than that between silicon dioxide and silicon.